is attended with a feeling of heat and perspiration. After the febrile production of heat has reached its maximum a period is reached in which the difference between the temperature of the skin and that of the body-covering equals that which is present in health. The skin again feels comfortable. Any change in the existing degree of rapidity of heat-dissipation acts as an irritant. Probably the intensity of the irritation and the sensibility of the cutaneous nerves is greater as a result of the elevation of temperature. However this may be, the result is that heat-dissipation and heat-production become equal. The bodily temperature remains at the same level (febris continua). There is thus again established a condition of the thermometric equilibrium, as in health, with the difference, however, that heat-production and heat-dissipation are both greater. This condition of equilibrium is maintained as long as the heat-production (which depends upon the febrile disease-process) and the conditions for heat-dissipation (including the bed and the surrounding temperature) remain unchanged.

SURGERY.

UNDER THE CHARGE OF

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THE SECONDARY UNION OF PORTIONS OF SKIN REMOVED FROM THE BODY WITH THE ADJACENT FAT.

HIRSCHBERG (*Archiv für klin. Chir.*, 1893, Band xlvi., Heft 1) deals at great length with the historical portion of his subject, to support his theory that hyperæmia and a weakened condition of vasor tonus are the salient features in the success of transplanting unpediculated skin-grafts, containing the entire thickness of the skin, and also the underlying connective and adipose layers of tissue. He says of his method: "The secret, in my opinion, of transplantation lies in the use of portions of skin rich in vascular supply, and especially in an artificially produced hyperæmia." He reports four successful cases in which the operation performed was the following: While the defect to be filled is held under compresses by an assistant, the operator places an Esmarch bandage and tube on the uplifted arm. The bandage is removed after a few moments, the arm laid upon the operating-table, and the portion of skin to be transplanted is beaten for two or three minutes with a doubled-up small rubber drainage-tube; he then cuts out the three sides of the graft; through these three sides he passes sutures, leaving each with its needle *in situ*. Not until the bleeding is entirely controlled does he remove the Esmarch tube. In a few minutes the flap reddens and is markedly swollen, and the papillæ of the cuticle stand out.

After all bleeding has stopped and the wound is aseptically clean, he cuts the fourth side with scissors, lays the graft, skin side down, upon an aseptic gauze compress soaked in warm normal salt solution, and rearranges his sutures. Then the skin is quickly placed in the prepared wound and sewn in place; sometimes fine approximation sutures are required. Any oozing under the graft is then gently stroked out at the free, or fourth side, which is then sutured in place. The dressing consists of protective gauze, compress cotton, and a light compressing bandage. The healing took about six weeks; there was slight necrosis and considerable exfoliation of the epidermis during the healing process.

SKIN-TRANSPLANTING WITHOUT A PEDICLE.

THE successful restoration of the skin, after traumatic injury or operative removal, to its normal condition is a subject of wide interest. The work done in this direction by **KRAUSE** (*Arch. für klin. Chir.*, Band xlvi., Heft 1) is noteworthy. He has within the past two years transplanted over one hundred grafts in twenty-one different cases; of these only four grafts entirely died. It does not matter how large the pieces are. Spindle-shaped strips eight to ten inches long and two and a quarter to three inches wide at their widest parts heal as easily as smaller ones. The main points in the production of good results are perfect asepsis, dry wounds, and a dry graft. The author's method of operation is as follows: The field of operation—either a fresh wound as after the removal of a tumor, or converted into a fresh wound by curetting—must be made antiseptic, preferably with sublimate solution; the antiseptic must then be completely washed away by a sterilized salt solution, and the wound dried with sterilized gauze. From this point the wound, the instruments, and the hands of the operator must be aseptic and dry. If the wound is an old one in which scar and other fibrous tissue has developed, all such tissue must be removed and only normal tissue remain. The same holds good for operations over the tibia; if there is thickening, it must be chiselled away. The field of operation is then covered by a compress and tight-fitting aseptic gauze bandage.

The skin that is to be transplanted is now thoroughly cleansed and made aseptic. Too much rubbing should be avoided; the sublimate should be entirely washed away with the sterilized salt solution, and the skin made perfectly dry. In this case, as in the other portion of the operation, the operator's hands and instruments must be dry, and asepsis, not antisepsis, used. The anterior and inner surfaces of the arms and thighs are to be used, as also that from the glútei. The strips taken should generally be spindle-shaped, as such wounds are more easily closed, and should be afterward trimmed as required. The section is cut out and then dissected up, the knife being held perpendicular to the flap. The layer of connective tissue between the skin and subcutaneous fat should be dissected up with it, but it makes no difference if small particles of fatty tissue come with it.

This graft or skin-flap is then dried by aseptic gauze compresses, with perhaps the arrest of the slight hemorrhage by torsion. It is immediately placed upon the already prepared wound, after the necessary trimming to make it fit, and is held in place by an aseptic gauze compress until it is fixed in place by a thin film of coagulated blood. Stitches are not needed, except, perhaps, in the face, and only act as foreign bodies.

The dressing consists of five per cent. sterilized iodoform gauze placed smoothly over the wound and fixed in place by the gentle pressure of an aseptic dressing, and if the case is on a limb, a splint. The first change of dressing is on the third or fourth day, when blisters will be found upon the transplanted graft, which must be carefully cut away. In order that there may be no injury to the graft, only the first bandage should be removed, and the limb then placed in a boric acid bath. In facial operations the iodoform gauze must be thickly spread with borated vaselin, and in all cases great care must be exercised in changing the dressings. The appearance, at the end of four days, is white, or, if soaked with blood, purplish and livid; at the end of seven or eight days there is a rose tint, which becomes more marked at the end of two weeks, especially when the exfoliated epidermis has been cleared away. There are sometimes slight superficial necroses that quickly heal over. The transplanted skin heals over any underlying normal tissue equally well. Complete healing occurs in from three to six weeks, depending on the underlying tissue and the age and condition of the patient. As the entire skin is used, eyebrow defects can be supplied by transplanted scalp. The skin is movable after healing has taken place, while microscopical examination twenty-two days after operation showed normal adipose tissue.

Anæsthesia Statistics.

Gurlt (*Arch. für klin. Chir.*, Band. xlvi., Heft 1, 1893) gives an interesting analysis of the statistics collected during the past three years regarding surgical anæsthesia. There were 50,062 observations made by sixty observers; there were 11 deaths, or 1 in every 4551 cases. This is the average for all anæsthetics except nitrous oxide as used in dentistry. There were 133,729 cases of chloroform narcosis, with 46 deaths, or 1 death in 2907 cases. There were 14,646 cases of ether narcosis, with 1 death. There was 1 death in 4118 cases of mixed chloroform and ether narcosis. There were 3440 cases of narcosis with the A. C. E. mixture, without a death. The proportion with the ethyl-bromide was 1 death in 4555 cases. Pental had the greatest mortality, 3 deaths occurring in 597 cases. The one case of death from ether reported was in a patient weak by an accident requiring amputation of both forearms, but the shock, collapsed, and alcoholic condition of the patient made recovery in any case improbable, and the patient died three hours after operation, so it can scarcely be called a death from ether. The general conclusion to be drawn from his *résumé* of these cases is that ether is showing itself to be the better anæsthetic, and is so considered by the surgeons of Germany. The absence of a death in 14,646 cases, and its adoption and further recommendation by many more eminent surgeons each year, show its rapid progress and the place it is earning for itself. As this author says of the reports made by its friends: "All these quotations, which are not insignificant in number, leave no doubt that we possess in ether the most harmless and most efficient anæsthetic for all purposes, and that it is our duty, wherever human life is concerned, to return, when our better judgment tells us, to that anæsthetic with which the era of surgical anæsthesia opened, and to abandon those that have so oft endangered life."

ENTÉROPLEXIE.

RAMAUGÉ, of Buenos Ayres, under this heading publishes in an interesting monograph (Buenos-Aires, Jacobo Peuser, 1893) the results of his experiments with an "enteroplexe" of his own invention. The instrument is made of aluminium; in form, it is made of two rings having rounded edges. At either extremity of one of the diameters are two slight elevations; in one ring (the female) there is a depression into which catches on the other (the male) are inserted. These catches fix the rings together in absolute position and leave sufficient space between for the soft tissues. The diameter of the rings is variable, and should be that of the calibre of the intestine, but this is not absolutely necessary. The application of the instrument is described at the following stages: 1. The introduction of the rings into the ends of the sectioned bowel. 2. The intestine is folded in over the rings, and held in place by four sutures which have been previously passed, two through each ring. 3. The fitting together of the two rings, the catches on the male ring fitting into the cavities in the female. The space between the two rings being equal to the thickness of the intestinal wall, and the two walls being compressed between them, there must be, and is, considerable pressure; this is sufficient to preclude all hemorrhage and the escape of intestinal gases and fluids, and will, by the time adhesions are sufficiently strong, produce necrosis and the sloughing of the included portions of the gut; this will release the rings and they will then pass easily out through the intestine. The author draws the following conclusions from his work: 1. Enterorrhaphy is a tedious and difficult operation, with an enormous mortality. 2. Enteroplexy requires but little time; it can be done by any physician, and produces a perfect cicatrization. 3. The cicatrix is small, linear, and does not cause a lessening of the intestinal calibre. 4. The "enteroplexe," on account of its weight, its form, and its volume, does not endanger the intestine, and is easily passed. 5. The indications for this operation are numerous, and this instrument is applicable to them all. 6. The experiments on animals give remarkable results. 7. This operation is the desideratum of gastro-intestinal surgery.

A SUCCESSFULLY OPERATED ABSCESS OF THE SPLEEN.

SENDLER (*Deutsche Zeitschr. für Chir.*, 1893, Bd. xxxvi., Heft 516) reports a case of abscess of the spleen, in a child four years old, which was cured by operation and drainage, the patient leaving the hospital thirteen days after operation. The abscess was of slow formation, and was situated in the lower portion of the spleen. At the time of the operation this organ was closely adherent to the abdominal wall, the pus had passed through the capsule and would soon have found its way out. The etiology of the case was not so